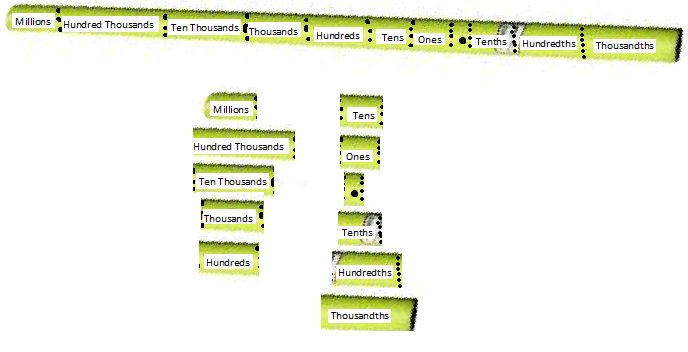
**K-5 Math Lesson Plan**

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| **Teacher:**  Alex Peabody, Paul Travers | | | **Grade: 5** | | | | **Date(s)**: Unit 1 Task 3 Day 1 | |
| **Unit Title:** 2012 Summer Olympics | | | | | **Corresponding Unit Task:** 2012 Summer Olympics – Rounding Decimals | | | |
| **Essential Question(s):** | | | | | | | | |
| **Materials/Resources** | | | | | **Essential Vocabulary** | | | |
| **Teacher:**  2 swimming pool noodles, 2 wooden dowels, | | **Student:** | | | | **compare/comparison**  **decimal/decimal point**  **tenths**  **Hundredths**  **thousandths**  **expanded form**  **base-ten numeral**  **place value** | | |
| **Learning Experience** | | | | | | | | |
|  | Day 1 | | | Day2 | | | | Day3 |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  5.NBT.3b  Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. (Correlates to NCSCOS Math Objective 1.01)  5.NBT.4  Use place value understanding to round decimals to any place.  (Correlates to NCSCOS Math Objective 1.01) | | | **Common Core State Standards:**  5.NBT.3b  Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. (Correlates to NCSCOS Math Objective 1.01)  5.NBT.4  Use place value understanding to round decimals to any place.  (Correlates to NCSCOS Math Objective 1.01) | | | | **Common Core State Standards:**  5.NBT.3b  Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. (Correlates to NCSCOS Math Objective 1.01)  5.NBT.4  Use place value understanding to round decimals to any place.  (Correlates to NCSCOS Math Objective 1.01) |
| **I Can Statement(s):**  I can round numbers from the tens to the millions place. | | | **I Can Statement(s):**  I can round numbers from thousandths to millions and solve rounding word problems. | | | | **I Can Statement(s):**  I can round numbers from the thousandths to the millions place. |
| **Activating Strategy/Hook:**  Have every student come to the board and in one word explain rounding. | | | **Activating Strategy/Hook:**  With two dowels students will compete to place correctly a swimming pool noodle that has been cut and inscribed with a place value on each segment in order. (millions to thousandths) **See Figure 1** | | | | **Activating Strategy/Hook:** |
| **Teacher Directed:**  Brainstorm on the whiteboard when it is important to round. Review/teach the skill of rounding numbers. Demonstrate rounding using the population of the city of Aberdeen. (see City Population chart below lesson)  \*Explain why you chose to round the population to the value you chose. | | | **Teacher Directed:**  The teacher will start by drawing a number line across the board. Then draw lines equally segmented (this is where you will write your whole numbers). Instruct students to draw a scale size number line in their notebook. Call on students to come up and place an index card with the corresponding number for the number line in the correct place on the board. Then ask the question while pointing the numbers 1 and 2 “What **number** is in the middle of 1 and 2?” After discussion take an index card labeled 1.5 and place it directly in between 1 and 2. | | | | **Teacher Directed:**  Review rounding and extend instruction to rounding to the thousandths. |
| **Guided Practice:**  Students will work in partners to round the population of the Cities Ahoskie and Albemarle. Students will defend the place value they chose to round to. | | | **Guided Practice:**  Students will work in partners demonstrate their knowledge of decimal number sense by completing “Identify that Decimal.” Students will explain their reasoning behind why they identified each decimal. | | | | **Guided Practice:**  Students will work in partners to complete “Round and Compare Cards” activity. |
| **Independent Practice:**  Students will work independently to round the remaining towns on the chart. Students will defend the place value they chose to round to in writing (in notebook/journal). | | | **Independent Practice:**  Students will complete “Decimal Number Line” worksheets. Students will explain their reasoning behind why they identified each decimal. | | | | **Independent Practice:**  Students will work independently to complete practice worksheets “Rounding Decimals”. |
| **Closing/Summarizing Strategy:**  Have students round Cary to the nearest thousand and explain the process in their journal. | | | **Closing/Summarizing Strategy:**  **Have students** | | | | **Closing/Summarizing Strategy:**  Journal: Students should explain the rounding process when given an example. |
| **Differentiation Strategies** | | | | | | | | |
| **Extension** | | | **Intervention** | | | | **Language Development** | |
| * Student researches other sports to compare times using >, <, =. * Student develops a product of choice to compare winning times of different sports and draws conclusions about the times. * Students create a menu whereby someone can eat lunch for under $10 and dinner for under $25. | | | * Student compares numbers one digit at a time. * Student uses audio recording of the sections that the student needs to read. * Use unit cubes to represent each number. * Implement number line to visually demonstrate. | | | | * Review mathematical symbols and terms: *less than; greater than; equal to* * Abbreviated form of task provided after the original task if needed.   **Writing to Learn:** After key points in the unit (after each task?), have students write in a journal using the following sequence:   * *Record*: state what they have learned * *Compar*e: Students pair up and compare what they have written and clarify. * *Revise*: Based on the interaction, students create a more developed and polished version of their statements. * *Combine*: Students collaborate to mesh their summaries * *Review*: Students use previous entries to prepare and guide them through subsequent tasks. * (Adapted from “Writing to Learn” by Robert Marzano in Educational Leadership, February 2012.) | |
| **Assessment(s):**  Collect journal and check independent work. Look to see if students reasoning for rounding made sense, and if they are able to perform the skill. | | | **Assessment(s):**  Collect journal and check independent work. Look to see if students reasoning for rounding made sense, and if they are able to perform the skill. | | | | **Assessment(s):** | |
| **Teacher Reflection:** (Next steps?) | | | **Teacher Reflection:** (Next steps?) | | | | **Teacher Reflection:** (Next steps?) | |

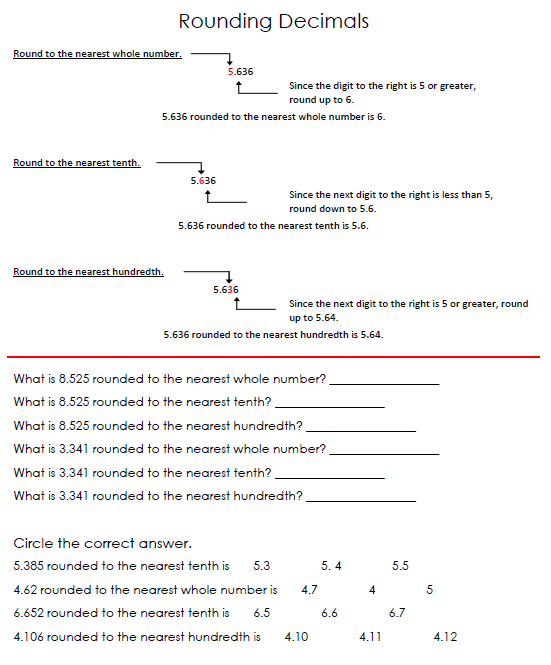
Figure 1

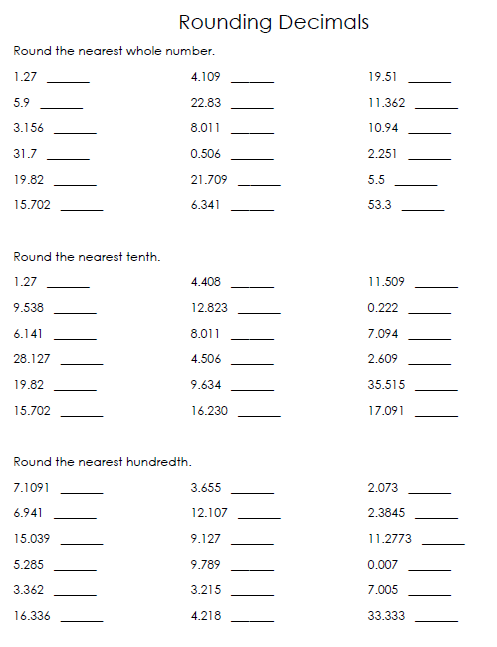


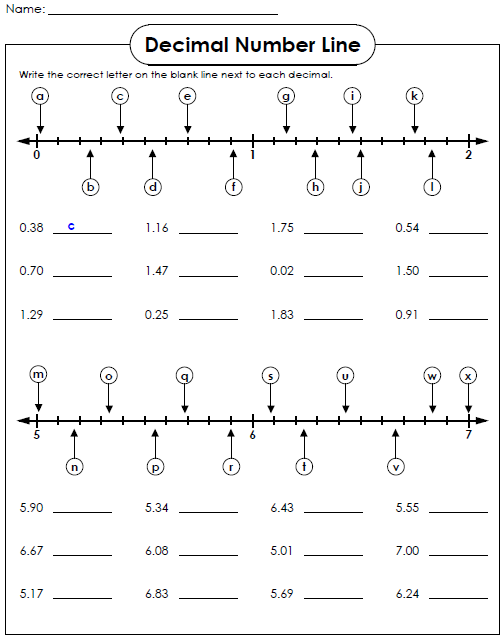
**NC Population by City**

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| --- | --- |
| **City or Town** | **Pop.** |
| [**Aberdeen**](http://www.citytowninfo.com/places/north-carolina/aberdeen) | 3,400 |
| [**Ahoskie**](http://www.citytowninfo.com/places/north-carolina/ahoskie) | 4,523 |
| [**Albemarle**](http://www.citytowninfo.com/places/north-carolina/albemarle) | 15,680 |
| [**Angier**](http://www.citytowninfo.com/places/north-carolina/angier) | 3,419 |
| [**Apex**](http://www.citytowninfo.com/places/north-carolina/apex) | 20,212 |
| [**Archdale**](http://www.citytowninfo.com/places/north-carolina/archdale) | 9,014 |
| [**Asheboro**](http://www.citytowninfo.com/places/north-carolina/asheboro) | 21,672 |
| [**Asheville**](http://www.citytowninfo.com/places/north-carolina/asheville) | 68,889 |
| [**Ayden**](http://www.citytowninfo.com/places/north-carolina/ayden) | 4,622 |
| [**Beaufort**](http://www.citytowninfo.com/places/north-carolina/beaufort) | 3,771 |
| [**Belmont**](http://www.citytowninfo.com/places/north-carolina/belmont) | 8,705 |
| [**Benson**](http://www.citytowninfo.com/places/north-carolina/benson) | 2,923 |
| [**Bessemer City**](http://www.citytowninfo.com/places/north-carolina/bessemer-city) | 5,119 |
| [**Black Mountain**](http://www.citytowninfo.com/places/north-carolina/black-mountain) | 7,511 |
| [**Boiling Spring Lakes**](http://www.citytowninfo.com/places/north-carolina/boiling-spring-lakes) | 2,972 |
| [**Boiling Springs**](http://www.citytowninfo.com/places/north-carolina/boiling-springs) | 3,866 |
| [**Boone**](http://www.citytowninfo.com/places/north-carolina/boone) | 13,472 |
| [**Brevard**](http://www.citytowninfo.com/places/north-carolina/brevard) | 6,789 |
| [**Buies Creek**](http://www.citytowninfo.com/places/north-carolina/buies-creek) | 2,215 |
| [**Burgaw**](http://www.citytowninfo.com/places/north-carolina/burgaw) | 3,337 |
| [**Burlington**](http://www.citytowninfo.com/places/north-carolina/burlington) | 44,917 |
| [**Canton**](http://www.citytowninfo.com/places/north-carolina/canton) | 4,029 |
| [**Carolina Beach**](http://www.citytowninfo.com/places/north-carolina/carolina-beach) | 4,701 |
| [**Carrboro**](http://www.citytowninfo.com/places/north-carolina/carrboro) | 16,782 |
| [**Cary**](http://www.citytowninfo.com/places/north-carolina/cary) | 94,536 |
| [**Chapel Hill**](http://www.citytowninfo.com/places/north-carolina/chapel-hill) | 48,715 |
| [**Charlotte**](http://www.citytowninfo.com/places/north-carolina/charlotte) | 540,828 |
| [**Cherryville**](http://www.citytowninfo.com/places/north-carolina/cherryville) | 5,361 |
| [**China Grove**](http://www.citytowninfo.com/places/north-carolina/china-grove) | 3,616 |
| [**Clayton**](http://www.citytowninfo.com/places/north-carolina/clayton) | 6,973 |
| [**Clemmons**](http://www.citytowninfo.com/places/north-carolina/clemmons) | 13,827 |
| [**Clinton**](http://www.citytowninfo.com/places/north-carolina/clinton) | 8,600 |
| [**Concord**](http://www.citytowninfo.com/places/north-carolina/concord) | 55,977 |
| [**Conover**](http://www.citytowninfo.com/places/north-carolina/conover) | 6,604 |
| [**Cornelius**](http://www.citytowninfo.com/places/north-carolina/cornelius) | 11,969 |
| [**Cramerton**](http://www.citytowninfo.com/places/north-carolina/cramerton) | 2,976 |

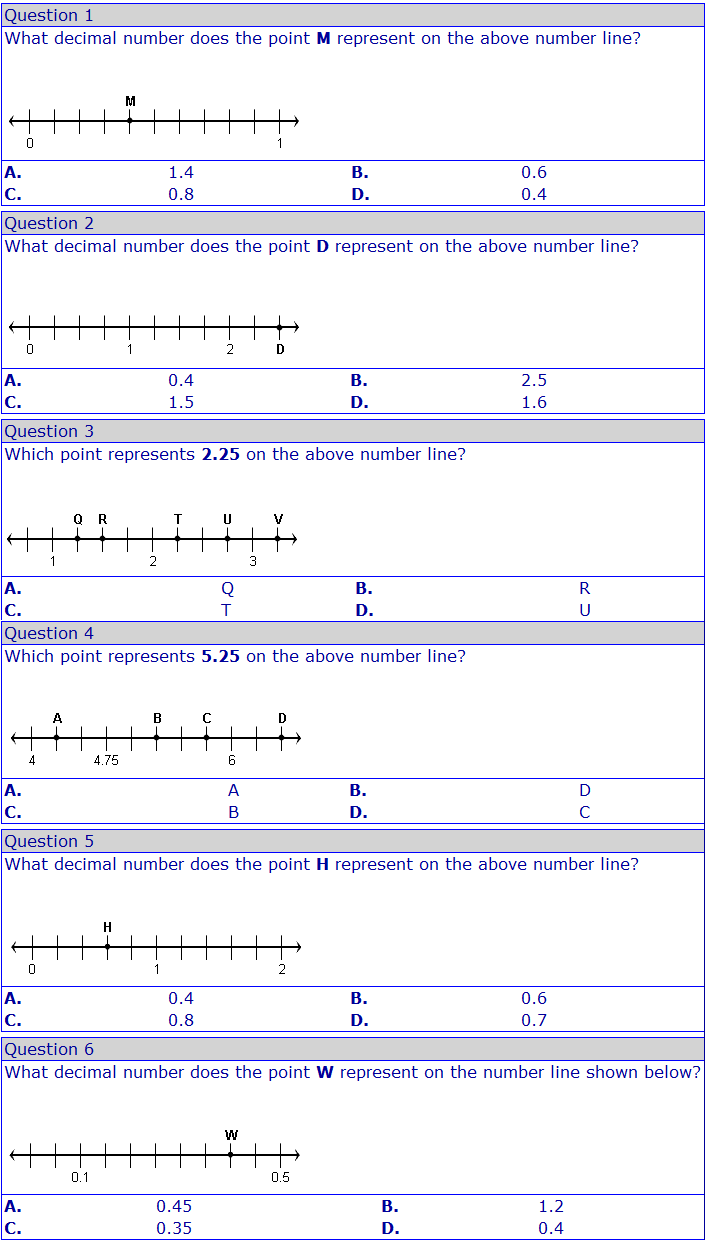


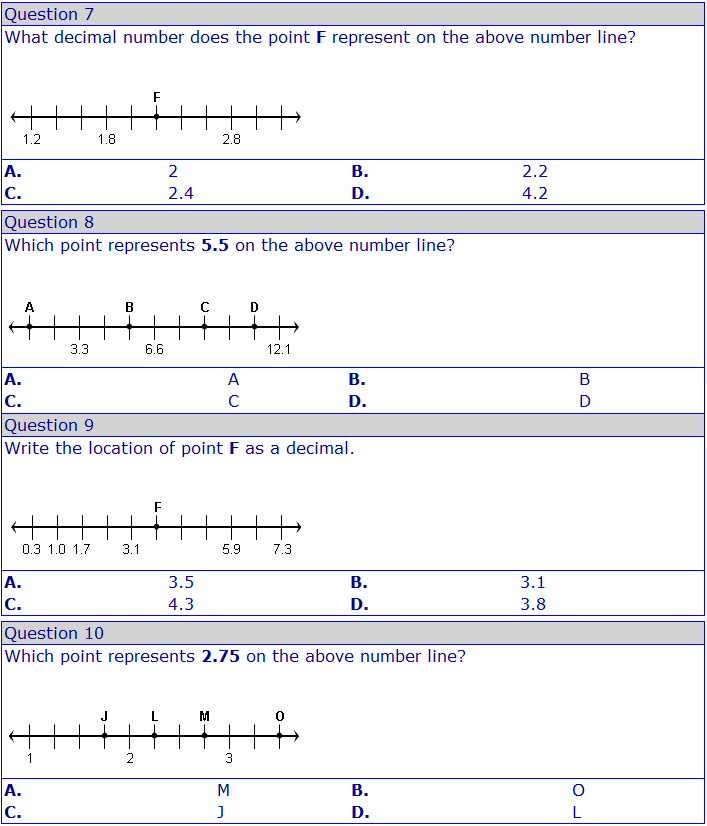






Identify that Decimal





Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Decimal Word Problems**

1. If 58 out of 100 students in a school are boys, then write a decimal for the part of the school that consists of boys.
2. A runner practices his craft to perfection. His race time is measured to the hundredth. Write this number as a decimal.
3. Five swimmers are entered into a competition. Four of the swimmers have had their turns. Their scores are 9.8, 9.75, 9.79, and 9.81. What score must the final swimmer get in order to win the competition?
4. To make a miniature ice cream truck, you need tires with a diameter between 1.465 cm and 1.472 cm. Will a tire that is 1.4691 cm in diameter work? Explain why or why not.
5. Ellen wanted to buy the following items: A DVD player for $49.95, a DVD holder for $19.95 and a personal stereo for $21.95. Does Ellen have enough money to buy all three items if she has $90 with her?
6. In Example 5, did we overestimate or underestimate? Explain your answer.
7. The department of transportation is considering building a four-lane highway from Greensboro to Virginia. In 2014, they will build 34.92 miles. 13.2 miles will be constructed the following year. 43.81 and 39.08 miles will be built in 2016 and 2017, respectively. How long will the highway be at the end of 2017 approximately?
8. Melissa purchased $39.46 in groceries at a store. The cashier gave her $1.46 in change from a $50 bill. Melissa gave the cashier an angry look. What did the cashier do wrong?
9. A rocket launching a satellite into space burns its motor for 14.28 seconds during the first stage. If the total flight time is 80 seconds, about how long is the second stage of motor burn?
10. If a 10-foot piece of electrical tape has 3.7 feet cut from it, about how much of the tape is left?